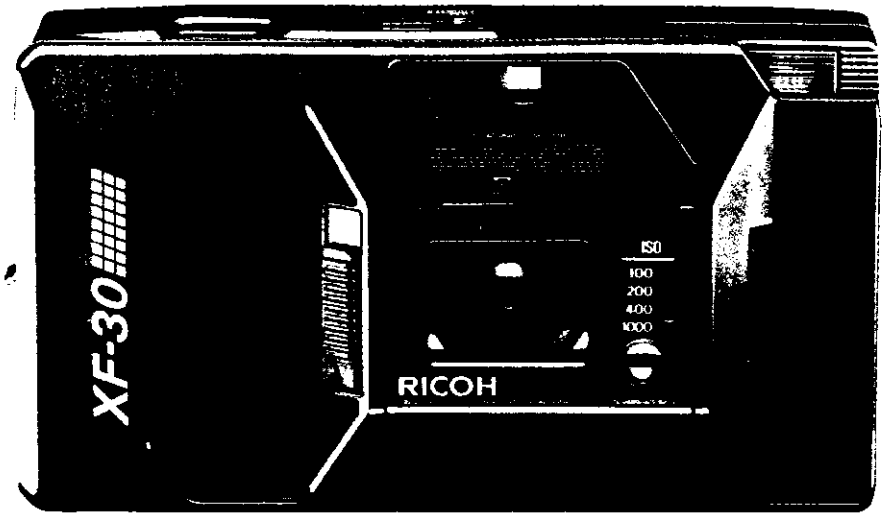

REPAIR MANUAL AND REPAIR PARTS

RICOH XF-30

RICOH COMPANY LTD.

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SPECIFICATIONS

Type:
35mm lens electronic shutter type

Lens:
35mm color Rikenon f4.0 lens, 3 elements, 3 groups.

Focusing:
By zone-focus marks from 1.0m to infinity

Shutter:
Programmed type electronic shutter, 1/30 – 1/500 sec.

Self-Timer:
Built-in electronic type. Operating delay of approx. 10 sec.

Viewfinder:
Reverse Galilean viewfinder
Magnification 0.53×, Field of view 80%.

Exposure Adjustment:
With CdS photocell, Exposure Coupling Range EV9 – EV17 (ISO 100)

Film Speed Range:
ISO 100 – 1000.

Film Advance/Rewind:
Electric motor with Film Transport Monitor.
Automatic 1st frame setting. Automatic film rewind at the end of film.

Film Loading:
Ricoh Auto-Load system.

Exposure Counter:
Additive, automatically resets to zero when the camera back is opened

Built-in Flash:
Automatic pop-up electronic flash in dim light

Guide Number:
10 (ISO 100, m.). Exposure adjustment through flashmatic system.

Interval Between Flashes:
About 6 seconds.

Number of Shots Possible:
With new Alkaline batteries (under normal temperature of 20°C) without using the flash unit: more than 100 rolls of 24 exposure film; when using the flash unit repeatedly: more than 10 rolls of 24 exposure film.

Power Source:
2 penlight Alkaline batteries or 2 penlight Manganese batteries (Nickel Cadmium batteries cannot be used).

Dimensions:
121mm, 4.8″ (W) × 66 mm, 2.5″ (H) × 45 mm, 1.8″ (D)

Weight:
225g, 7.9oz (without batteries)

Specifications and appearance are subject to change without notice.

DISASSEMBLING OF MAJOR COMPONENT PARTS

1. Bottom cover (Fig. 1)

(1) Open the Battery cover (No. 13), then take off the Screw (No. 7).
(2) Take off five Screws (No. 8, 9, 10).
(3) Remove the Bottom cover (No. 11).

2. Front cover (Fig. 1)

(1) Take off two Screws (No. 5).
(2) Take off two Screws (No. 4) and the Patorone holder (No. 12).
(3) Remove the Front cover (No. 6).

3. Top cover (Fig. 1)

(1) Take off the screw (No. 1).
(2) Remove the Top cover (No. 2).
(3) Remove the Release button (No. 3).

Note: To avoid the electoric shock, discharge the electricity between Ⓐ and Ⓑ, using a shunt resistor (Approx. 500Ω, 2W) shown in Fig. 2.

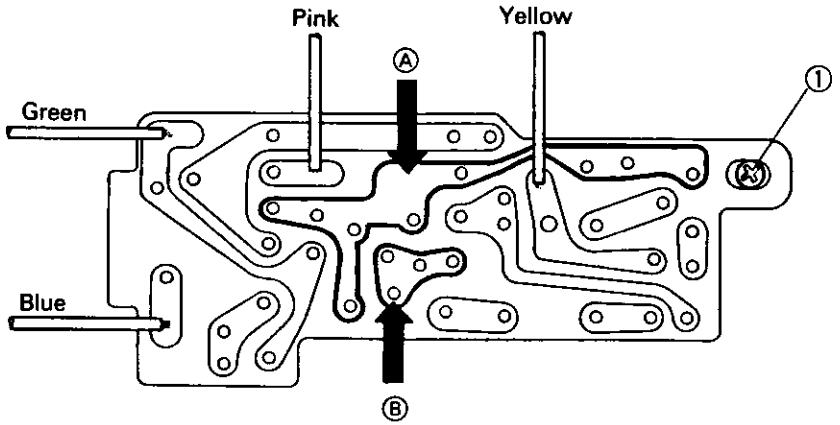


Fig. 2

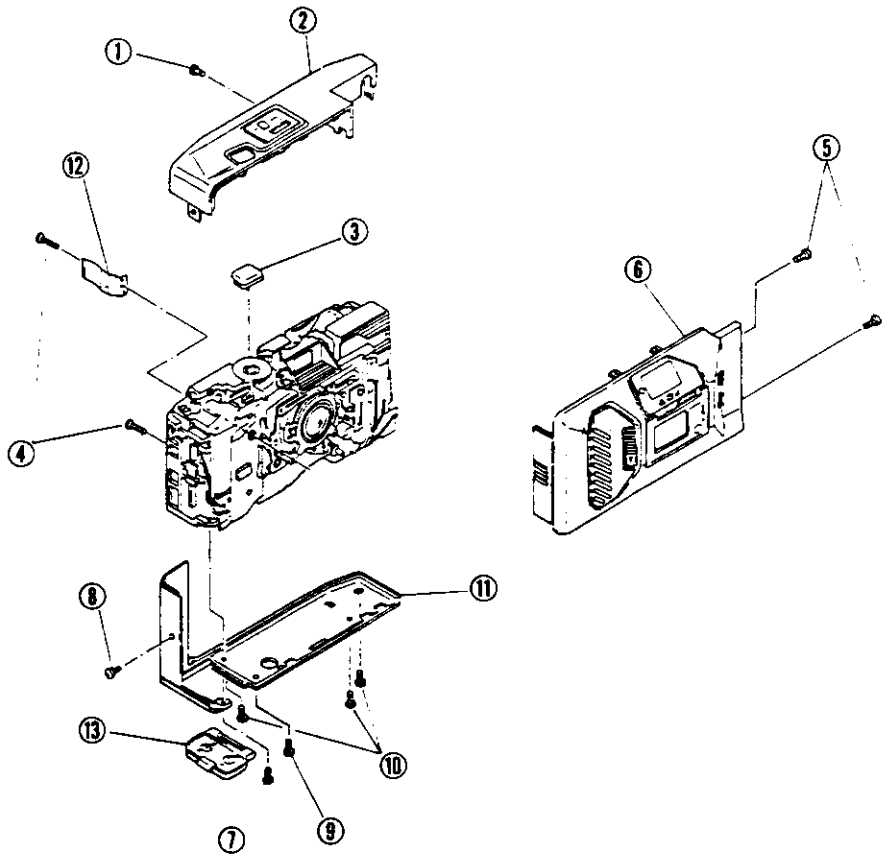


Fig. 1

4. Flash ass'y

(1) Remove the Blue lead wire shown in Fig. 2.
(2) Remove five Lead wires (Pink, Yellow, Green, Red, Black) shown in Fig. 3.
(3) Take off the Screw (Fig. 2 No. 1), and two Screws (Fig. 3. No. 1, 2).
(4) Remove the Flash ass'y.

5. Viewfinder unit

(1) Remove the Capacitor on the Power supply FPC from the Viewfinder frame. (Fig. 4 No. 1)
(2) Remove the Self LED on the AE FPC from the Viewfinder frame (Fig. 4, No. 2)
(3) Remove the soldering portion shown in Fig. 5, No. 1.
(4) Take off two Screws (P. 28 No. 43) and Remove the Holder plate (P. 28 No. 49)
(5) Remove the Winding signal. (P. 28 No. 26)
(6) Take off four Screws (Fig. 5, No. 2, 3, 4, 5)
(7) Remove the Viewfinder Unit and the Winding signal roller ass'y (P. 28 No. 32)

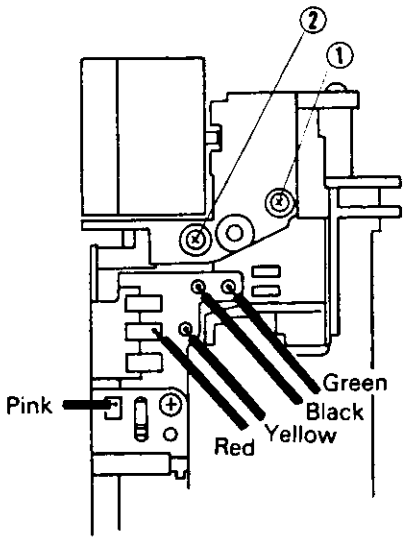


Fig. 3

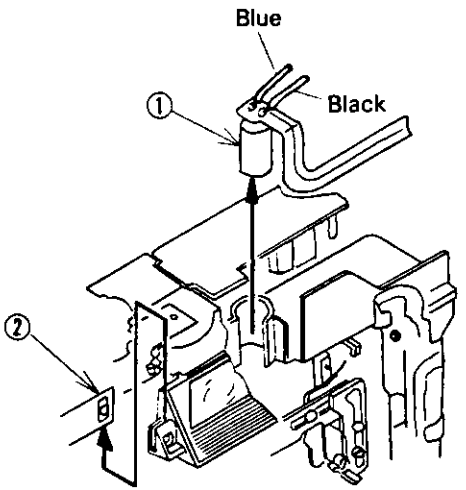


Fig. 4

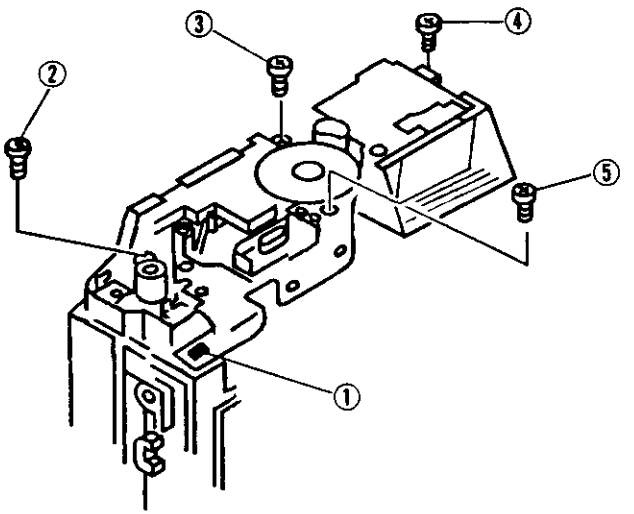


Fig. 5

6. Shutter

(1) Take off the Screw (P. 28 No. 37) and remove the Flash plate (P. 28 No.36).
(2) Remove the Spring (No. 2) from the SW Lever (No. 1) shown in Fig. 6.
(3) Take off two Screws (No. 3, 4) shown in Fig. 6.
(4) Remove the S. gear hold u. (No. 5) shown in Fig. 6.
Note: Do not bent contacts.
(5) Remove the S. set lever (Fig. 18 No. 3), the S set cam (Fig. 18 No. 2), and the Sprocket (Fig. 18, No. 1).
(6) Detach the soldering of two Lead wires (Blue, Red) from the P Mg. shown in Fig. 7.
(7) Detach the soldering of the Lead wire (Red) shown in Fig. 8.
(8) Detach nine soldered portions on the AE FPC (No. 1) and the P FPC (No. 2) shown in Fig. 9.
(9) Take off the Screw (P. 30 No. 1) on the W. printed board ass'y (P. 30 No. 2).
(10) Remove the Spring (No. 1) on the Shutter base plate (No. 2) shown in Fig. 10.
(11) Take off four Screws (No. 1) shown in Fig. 11.
(12) Remove the Shutter ass'y.

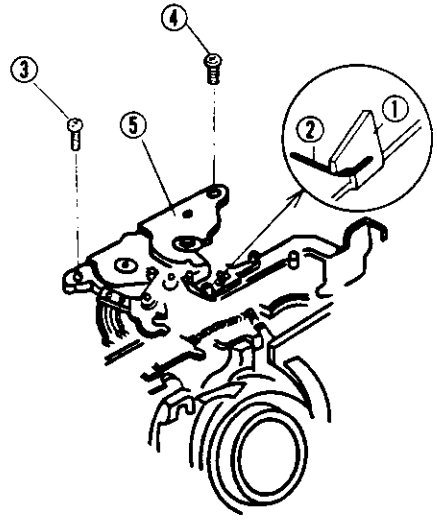


Fig. 6

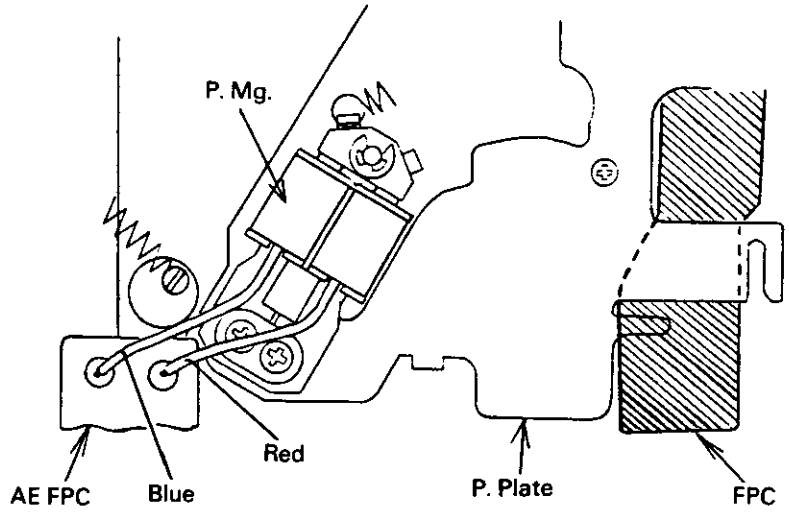


Fig. 7

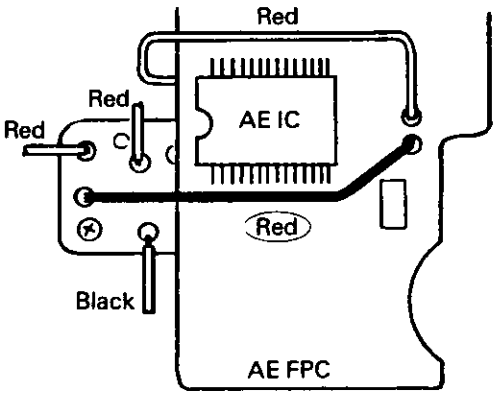


Fig. 8

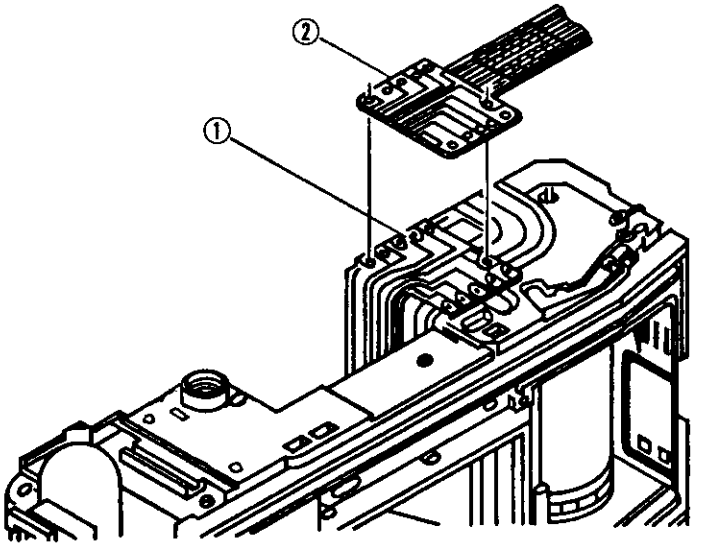


Fig. 9

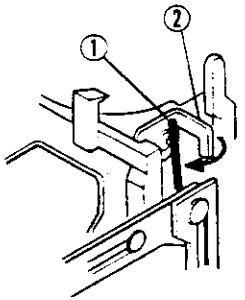


Fig. 10

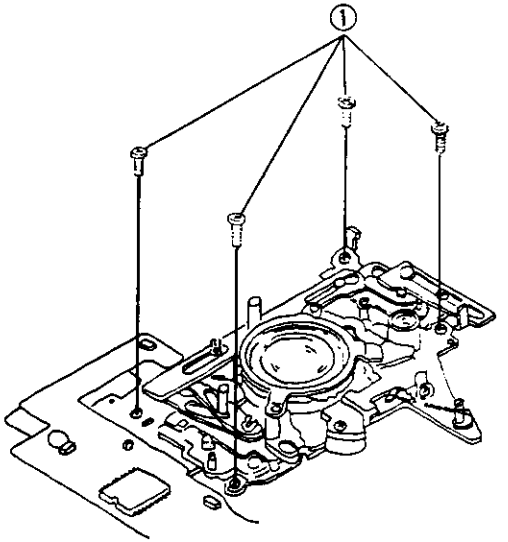


Fig. 11

7. P lever plate ass'y

(1) Detach the soldering of two Lead wires (Blue, Black) from the Motor shown in Fig. 4.

(2) Take off two Screws (P. 28 No. 43, 44) and remove the P lever plate ass'y (P. 28 No. 41).

(3) Remove the P lever ass'y (P. 28 No. 40).

8. R gear base plate ass'y

(1) Take off three Screws (P. 26 No. 19) and the Screw (P. 26 No. 20).

(2) Remove the R gear base plate ass'y (P. 26, No. 21 ~ 26).

(3) Remove five gears (P. 26 No. 27 ~ 30).

9. Winding plate

(1) Take off three Screws (P. 26 No. 4).

(2) Remove the Winding plate (P. 26 No. 5).

(3) Remove the Winding 5th. gear (P. 26 No. 7) and the Winding 6th gear A (P. 26 No. 12).

Note: When disassembling more, remember the hook position of the Spring (P. 26 No. 13), the set lever spring (P. 26 No. 32) and the Spring (P. 26 No. 33).

ASSEMBLING

1. W-R changing plate
   (1) Clean up both contacts on the W-R changing plate (Fig. 12, No. 6) and the Changing lever ass'y (Fig. 12, No. 5).
   (2) Put the Wind set button (Fig. 13, No. 1) to the Body.
   (3) Set the Changing lever ass'y (Fig. 12, No. 5) to the Body.
   (4) Set the Set lever ass'y (Fig. 13, No. 4) and the Shaft: Set lever (Fig. 13 No. 3).
   (5) Set the Changing lever plate (Fig. 12, No. 3) and tighten two Screw (Fig. 12, No. 1, 2).
   (6) Set the Spring (Fig. 12, No. 4).

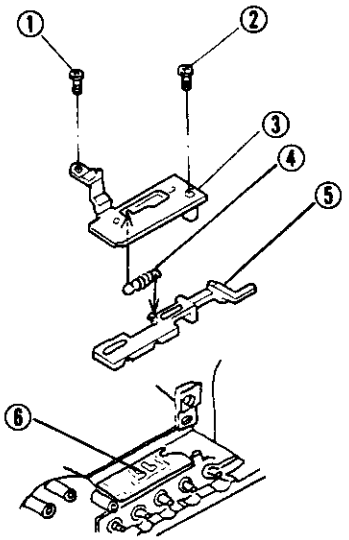


Fig. 12

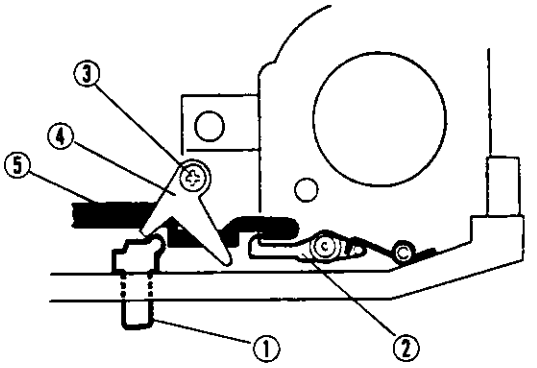


Fig. 13

2. Winding plate B (Fig. 14)

(1) Set the Spool gear (No. 6) to the Motor shaft (No. 9).
(2) Set the Winding 6th gear B (No. 5).
(3) Set the S. 1st gear (No. 7).
(4) Set the Shaft: S 2nd gear (No. 8).
* When assembling the other side of the Shaft, hold Ⓐ part with Pliers and fix the S gear 3rd (P. 24 No. 7) with the Screw (P. 24 No. 6).
(5) Set the Winding stop lever (No. 4), and the Spring (No. 3).
(6) Set the Winding plate B (No. 2) with two Screws (No. 1).

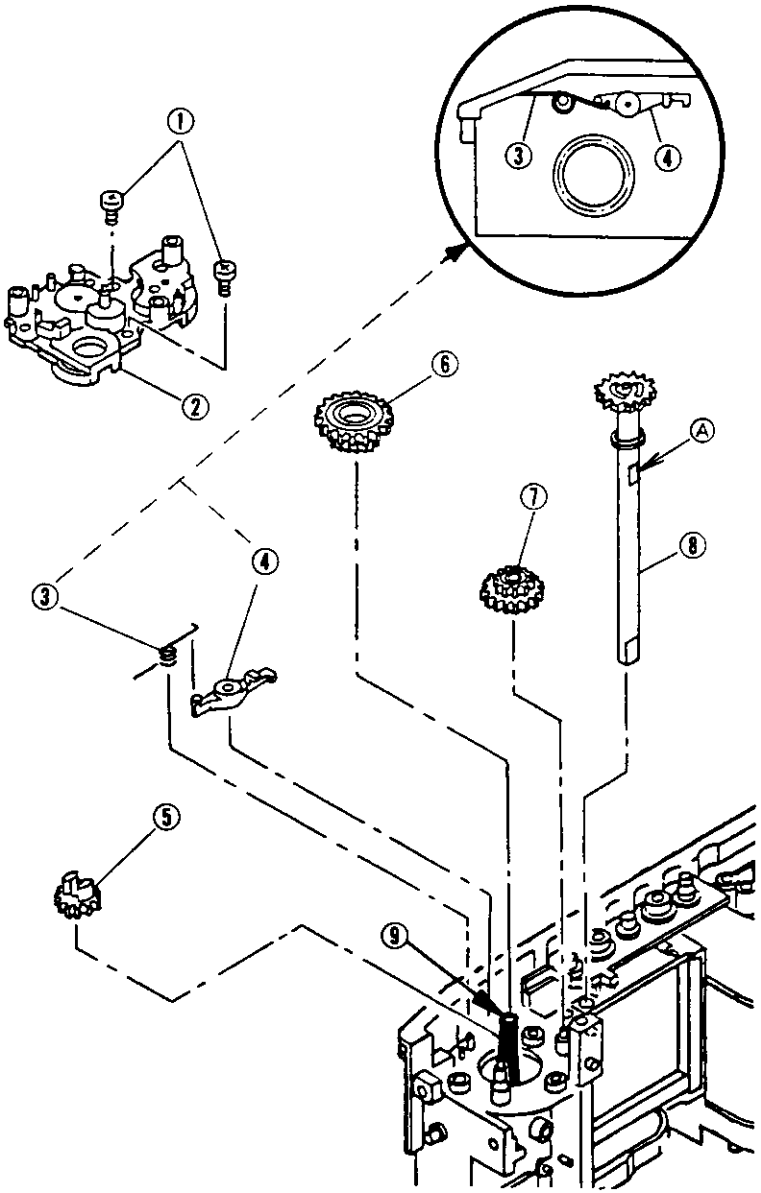


Fig. 14

3. Winding plate (Fig. 15)

(1) Set the Winding 1st gear (No. 12), the 1st lever ass'y (No. 11) and the Plate: W. 1st gear (No. 10) with the Screw (No. 9).
(2) Fix the Spring (No. 13) between Ⓐ and Ⓑ.
(3) Fix the Set lever spring (No.14).
(4) Set the Winding 6th gear A (No. 6).
(5) Set the Winding 3rd lever ass'y (No. 8).
(6) Set the Winding 5th gear (No. 7) to the Winding plate (No. 5) and set these parts on the Body with three Screws (No. 4).
Note: Ⓒ portion comes out form Ⓓ hole.
(7) Set the Return lever (No. 2) with the Retaining ring (No. 1),then set the Spring (No. 3).

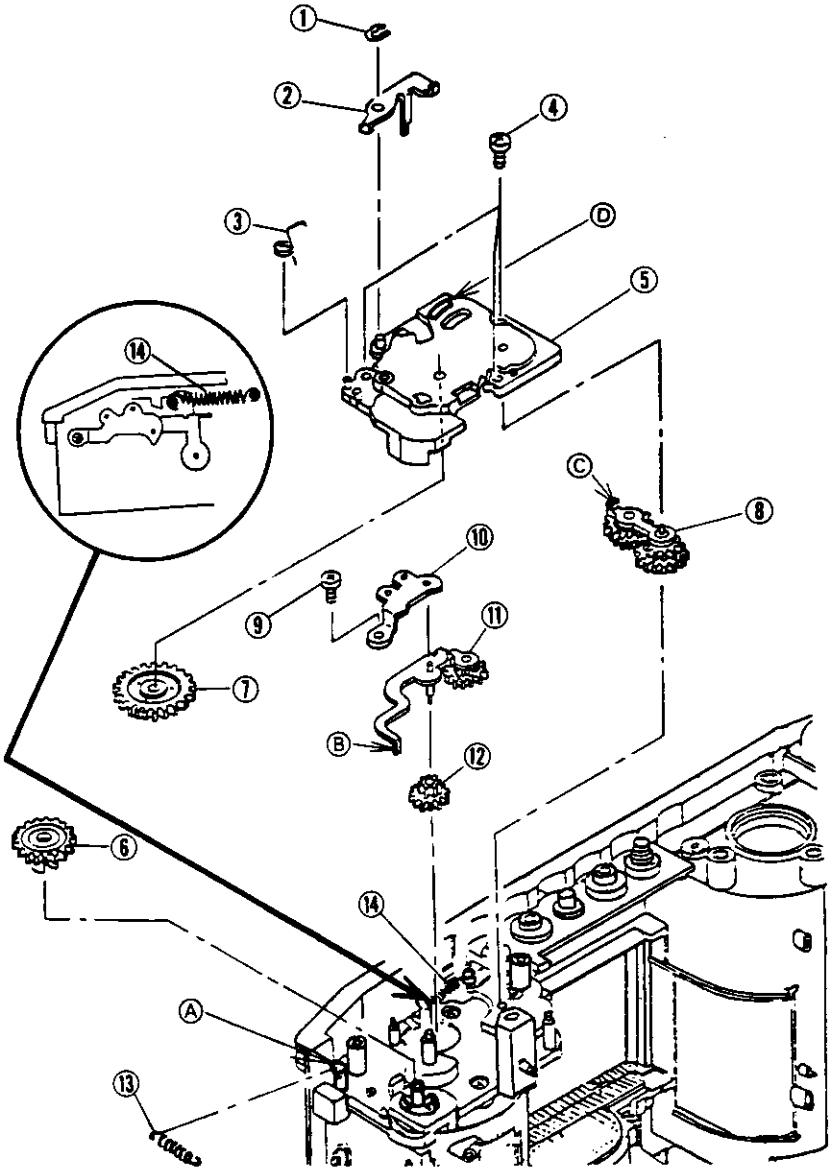


Fig. 15

4. R gear base plate ass'y

(1) Set five gears (P. 26 No. 27 ~ 30).

(2) Set the R gear base plate ass'y (P. 26 No. 21) with four Screws (P. 26 No. 19, 20).

5. P lever plate ass'y

(1) Set the P lever plate ass'y (P. 28 No. 41) with two Screws (P. 28 No. 43, 44).

(2) Set the FPC as shown in Fig. 7.

6. Shutter

(1) Set the Shutter ass'y to the Body with four Screws shown in Fig. 11.
(2) Set the P. plate: wind (P. 30 No. 2) to the Shutter with the Screw (P. 30 No. 1).
(3) Set the Spring (No. 1) to the portion of the Shutter (No. 2) shown in Fig. 16.
(4) Solder two Lead wires (Red, Blue) from the P Mg. shown in Fig. 7.
(5) Solder the Lead wire (Red) shown in Fig. 8.
(6) Set the AE FPC on the Tool (31369997) first, then set the P FPC on it. (Fig. 17).
(7) Solder nine portions with care.

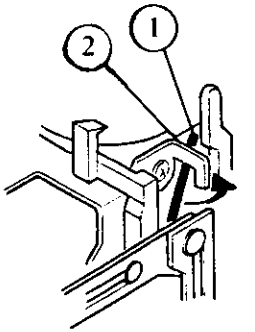


Fig. 16

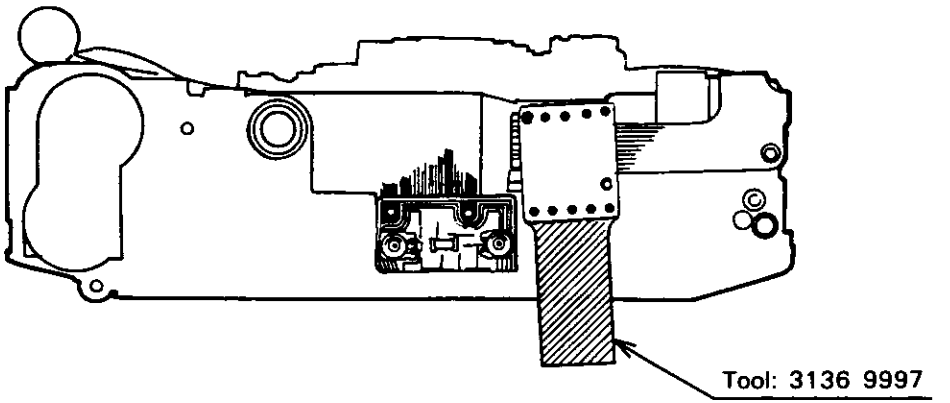


Fig. 17

7. **S. gear hold u. (Fig. 18)**

(1) Put the Sprocket (No. 1) on the Body.

(2) Put the S set cam (No.2) on the Body.
Ⓐ Part parallels the Body.

(3) Put the S set lever (No. 3) on the Body.
Ⓑ Part comes right side of the Shutter lever pin.

(4) Put the S gear hold u. (No. 4) with two Screw (No. 5).
Note: Clean up the contacts before assembling.

(5) Set the spring to the SW. lever shown in Fig. 6.

(6) Put the Flash plate (P. 28 No. 36) with the Screw (P. 28 No. 37).

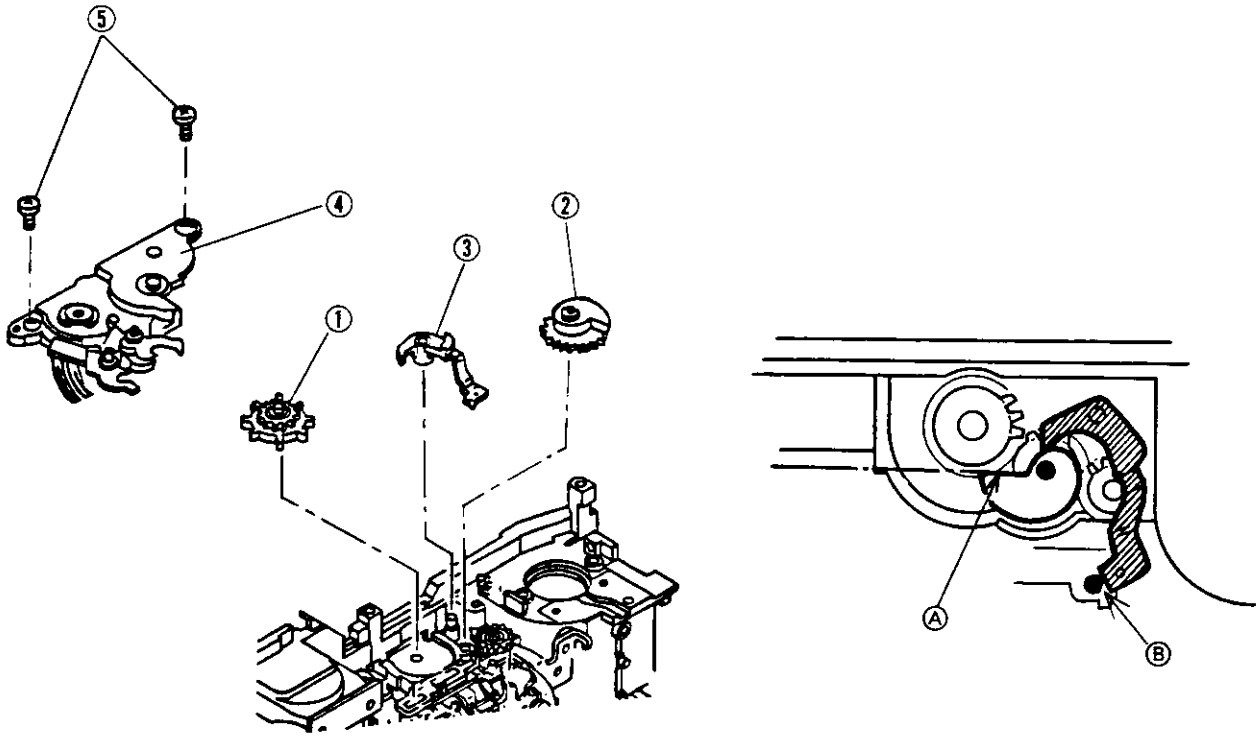


Fig. 18

8. Viewfinder U.

(1) Put the Winding signal roller ass'y (P. 28 No. 32) to the Body.

(2) Put the Viewfinder Unit on the Body with four Screws (No. 2, 3, 4, 5) shown in Fig. 5.

Note: Put the C2 gear shaft correct way as shown in Fig. 18-A.

(3) Put the Winding signal (P. 28 No. 26).

(4) Solder the portion (No. 1) shown in Fig. 5.

(5) Put the Plate (P. 28 No. 49) with two Screws (P. 28 No. 43).

Note: Clean up the Contact before assembling.

(6) Put the Capacitor on the Power supply FPC (No. 1) and the Self LED (No. 2) to the Viewfinder frame shown in Fig. 4.

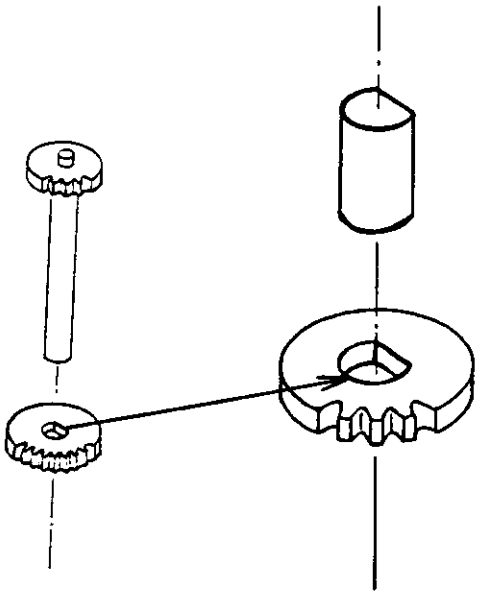


Fig. 18-A

9. Flash ass'y

(1) Put the Flash printed board ass'y with the Screw (P. 28 No. 69).
(2) Put the Flash case ass'y with two Screws. (Fig. 3 No. 1, 2)
(3) Solder the Lead wires shown in Fig. 3.
(4) Arrange the Lead wires as shown Fig. 19.

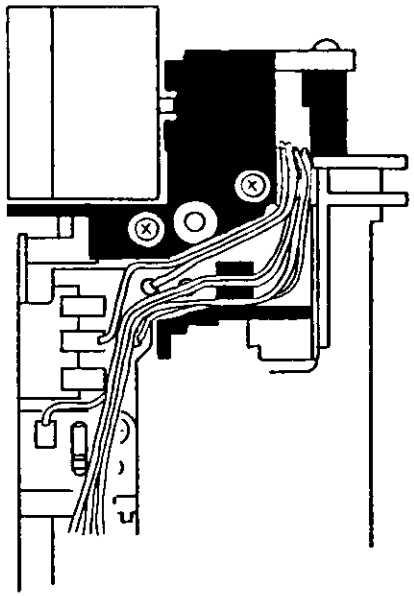


Fig. 19

10. Top cover (Fig. 1)

(1) Put the Release button (No. 3).
Note: Pay attention with direction of the Release button.

(2) Put the Top cover (No. 2) with the Screw (No. 1).

11. Front cover

(1) Put the AE FPC holder (P. 22 No. 19) to the bottom part of the Body.

(2) Set the Parts on the Shutter ass'y as follow (Fig. 20).
① Focusing lever (No. 1) ..... Middle click position.
② ISO lever (No. 2) ..... ISO 100 position (Push to arrow direction).
③ Fixed focus lever (NO. 3) ..... Fixed focus position (Push to arrow direction).

(3) Set the Parts on the Front cover as follow.
① Focusing button ..... ◎ position
② ISO button ..... ISO 100 position
③ Lens cover ..... Close

(4) Put the Front cover and tighten two Screws (Fig. 1, No. 5).

(5) Put the Patorone holder (Fig. 1, No. 12) and tighten two Screws (Fig. 1, No. 4).

12. Bottom cover (Fig. 1)

(1) Put the Battery cover (No. 11).

(2) Put the Bottom cover with six Screws (No. 7, 8, 9, 10).

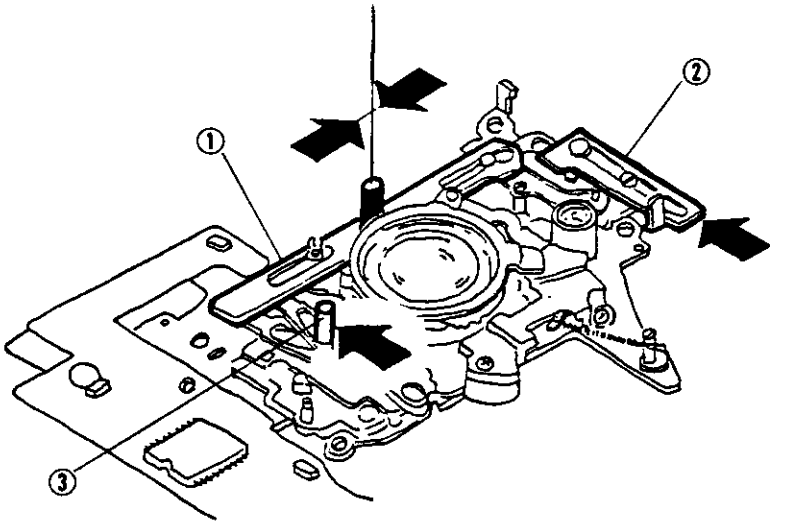


Fig. 20

ADJUSTMENT

1. Lens Focus Adjustment (Fig. 21)

* Remove the Batteries at first.

(1) Release the Shutter by pushing the Lever (No. 1) to arrow direction.

(2) Set the Focus lever (No. 2) on middle click position (◎ 2.5m).

(3) Push the Lever (No. 3) to arrow direction to open the Shutter.
Note: Do not deform the Spring.

(4) Loosen the Screw (No. 4) and turn the Lens to adjust the Focusing with in.
−15.0 ± 0.5 mm with f = 193.5 mm colimeter

2. AE adjustment

Note: Put the Front cover everytime when checking the AE. (or make the Dummy front cover).

(1) Turn the VR-1 (Fig. 22) to adjust the low brightness.

(2) Turn the VR-2 (Fig. 22) to adjust the high brightness.

K = 1.3

ISO	LV	Tolerance	Adjust part
100	9	± 1.0 EV	VR-1
100	12	± 1.0EV	Checking
100	15	± 1.0 EV	VR-2

Note: Flash pops up within 9 ± 1EV

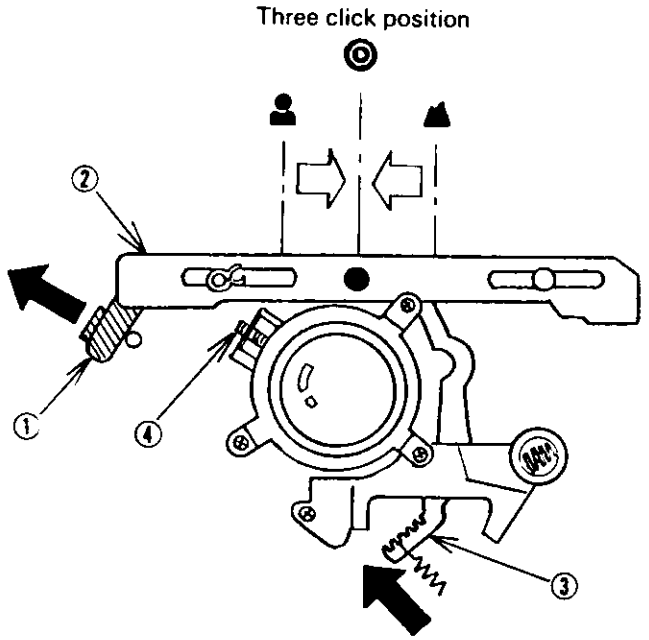


Fig. 21

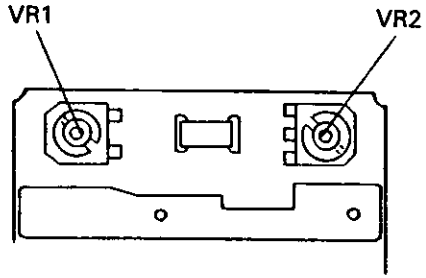


Fig. 22

3. FM adjustment (Fig. 23)

* Remove the Batteries at first.

(1) Release the Shutter by pushing the Lever (No. 1) to arrow direction.

(2) Push the Lever (No. 2) to arrow direction to pop up the Flash.

(3) Set the Focus lever (No. 3) to the 👤 position. (Left side click).

(4) Set the ISO plate (No. 5) to the ISO 1000 position.

Note: When adjusting, keep Ⓐ part of the Lever (No. 5) to the arrow direction.

(5) Push the lever (No. 4) to the arrow direction to open the Shutter blade.

(6) Adjust the Pin (No. 6) to get the Aperture F. 16.

(7) Check the F5.6 at ISO 200 and the Focus lever ◎ position.

ISO	Focus lever Position	Aperture	
1000	Left side click 👤 (1.2 m)	F16 ± 1	Adjusting point
200	Middle click ◎ (2.5 m)	F5.6 ± 1	Checking point

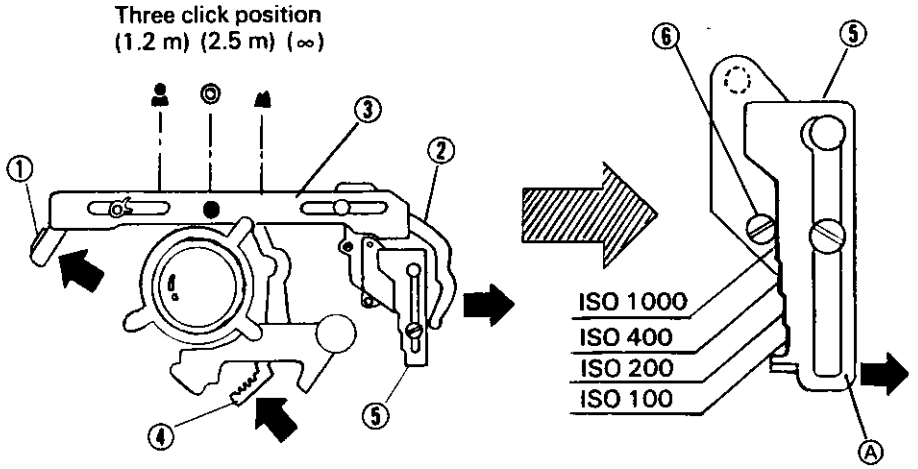
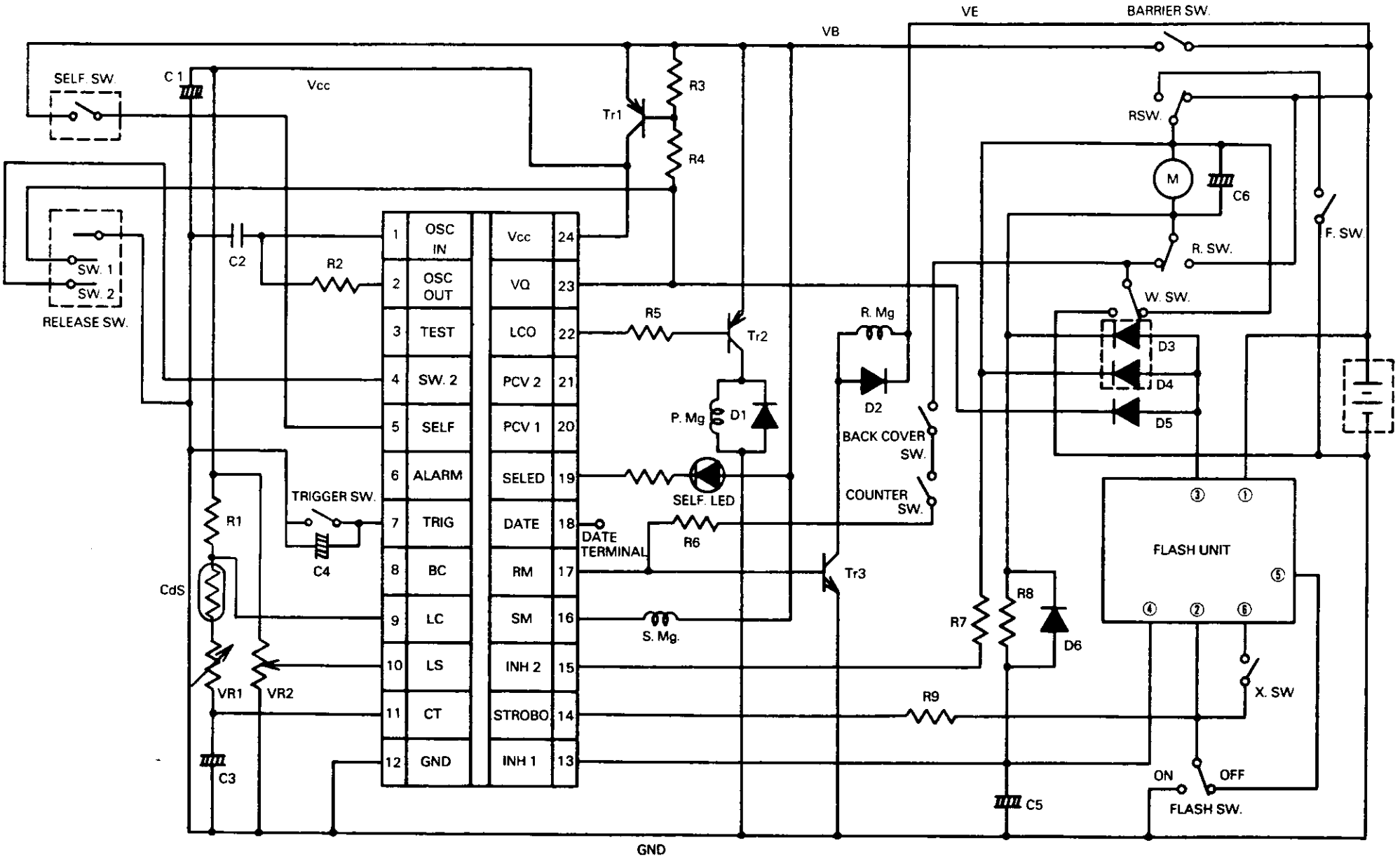
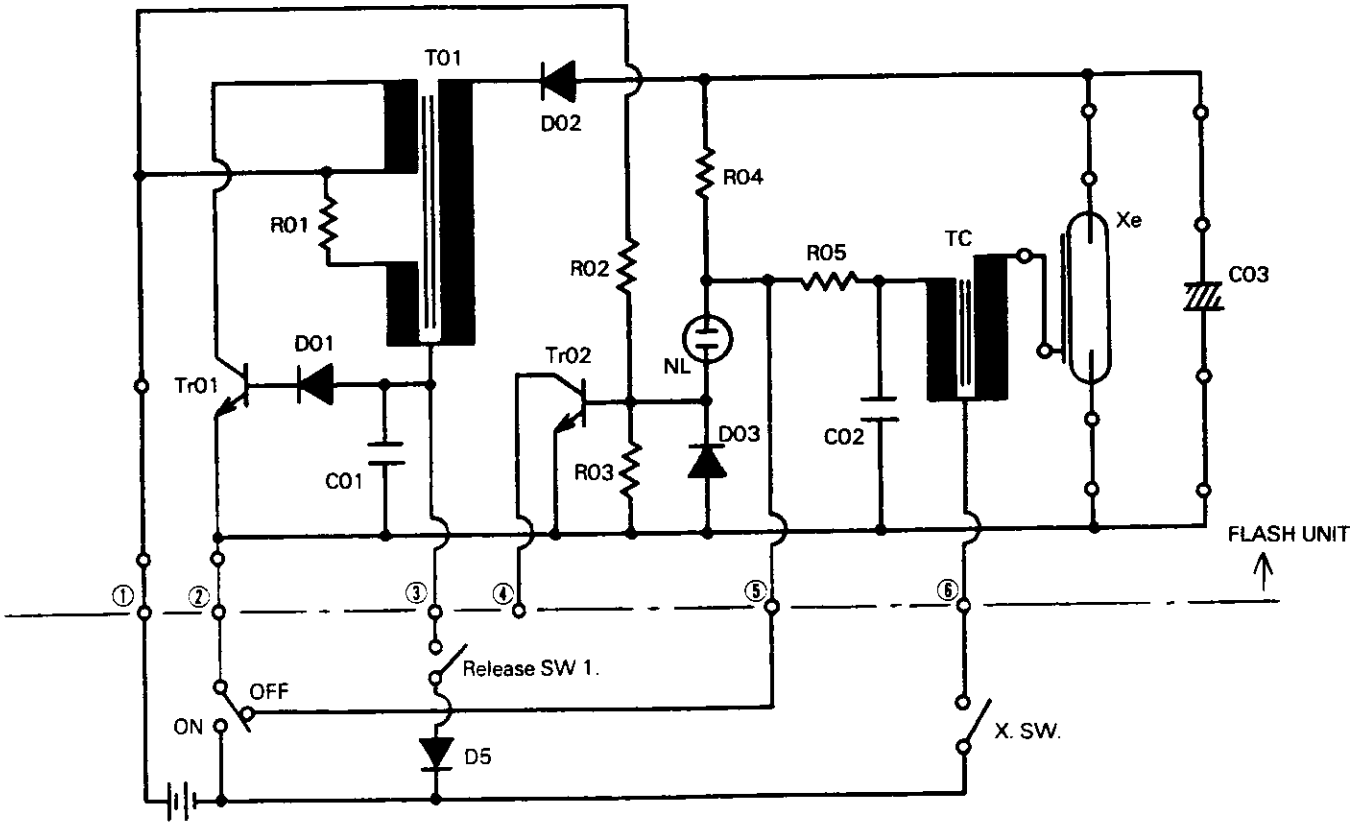


Fig. 23

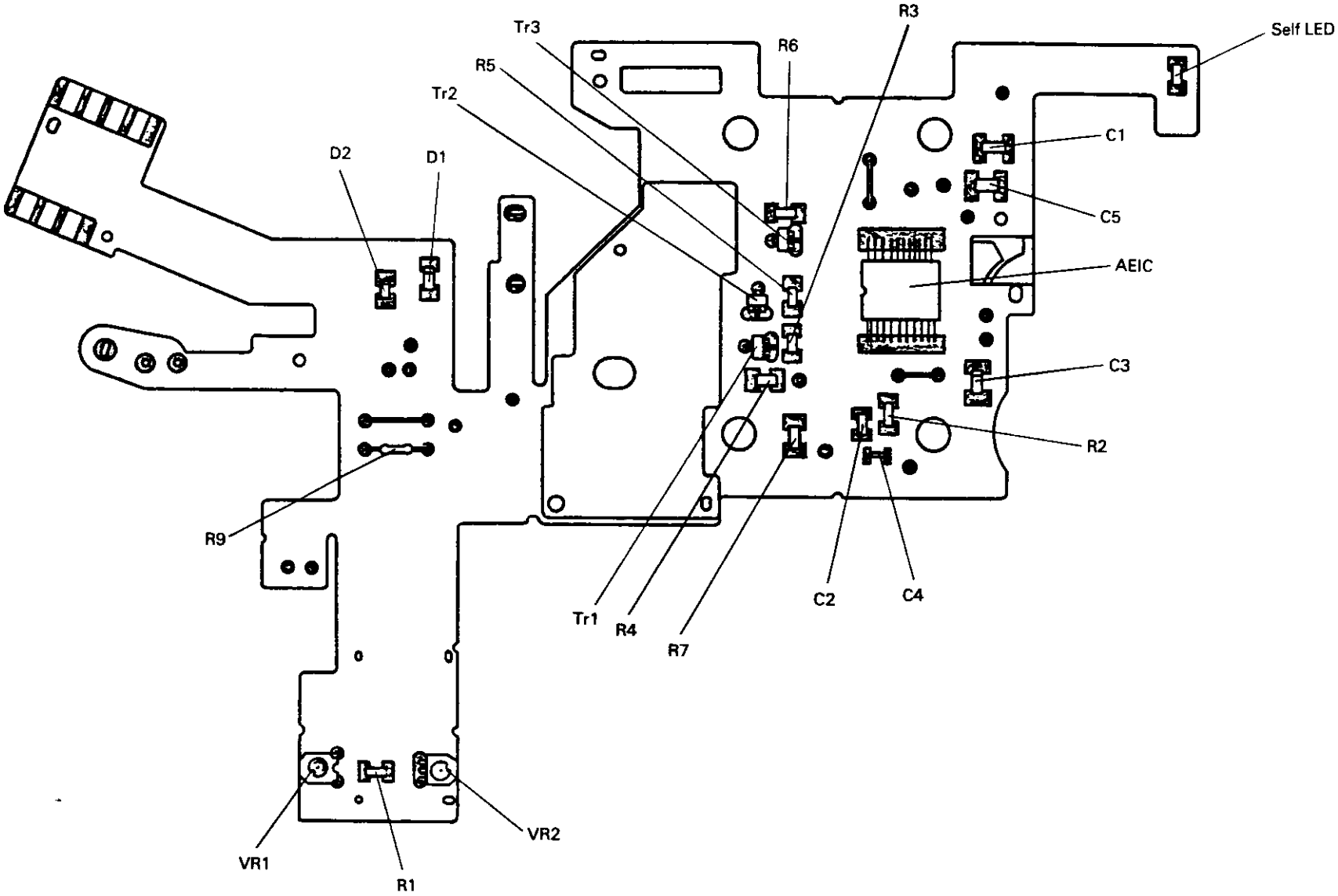
SCHEMATIC DIAGRAM



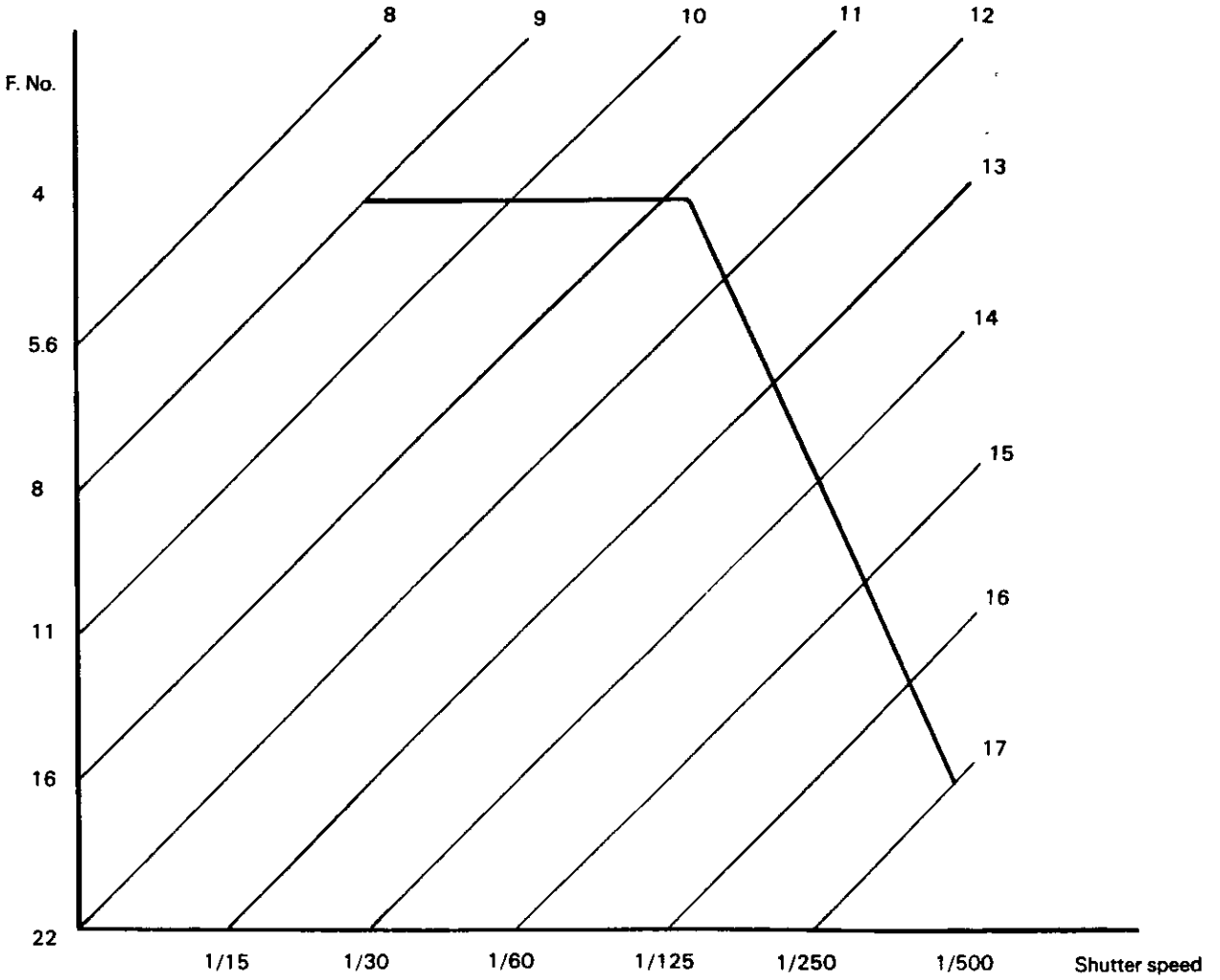
SCHEMATIC DIAGRAM (FLASH UNIT)



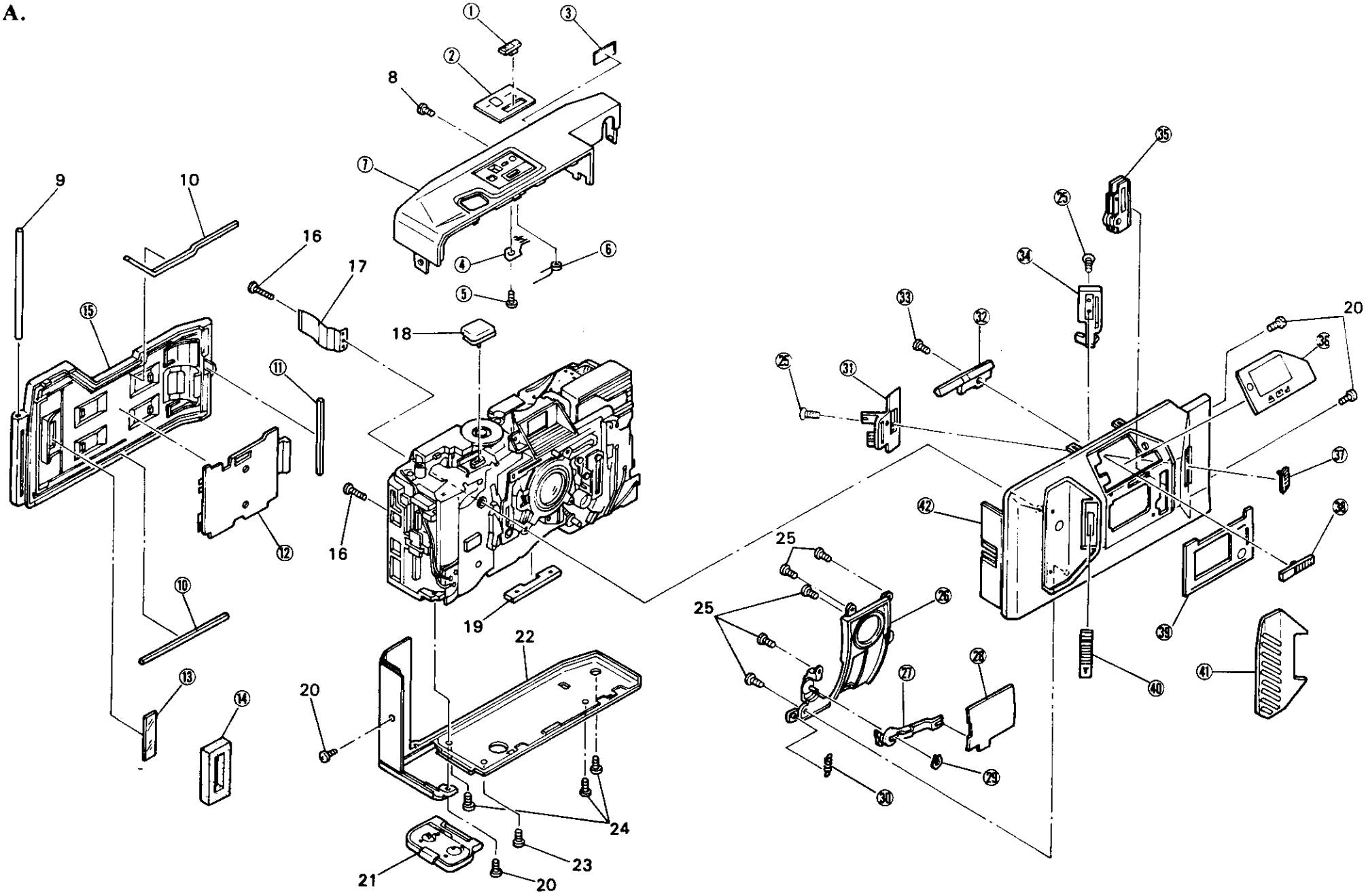
PARTS ARRANGEMENT FOR AE FPC



SHUTTER PROGRAM DIAGRAM



A.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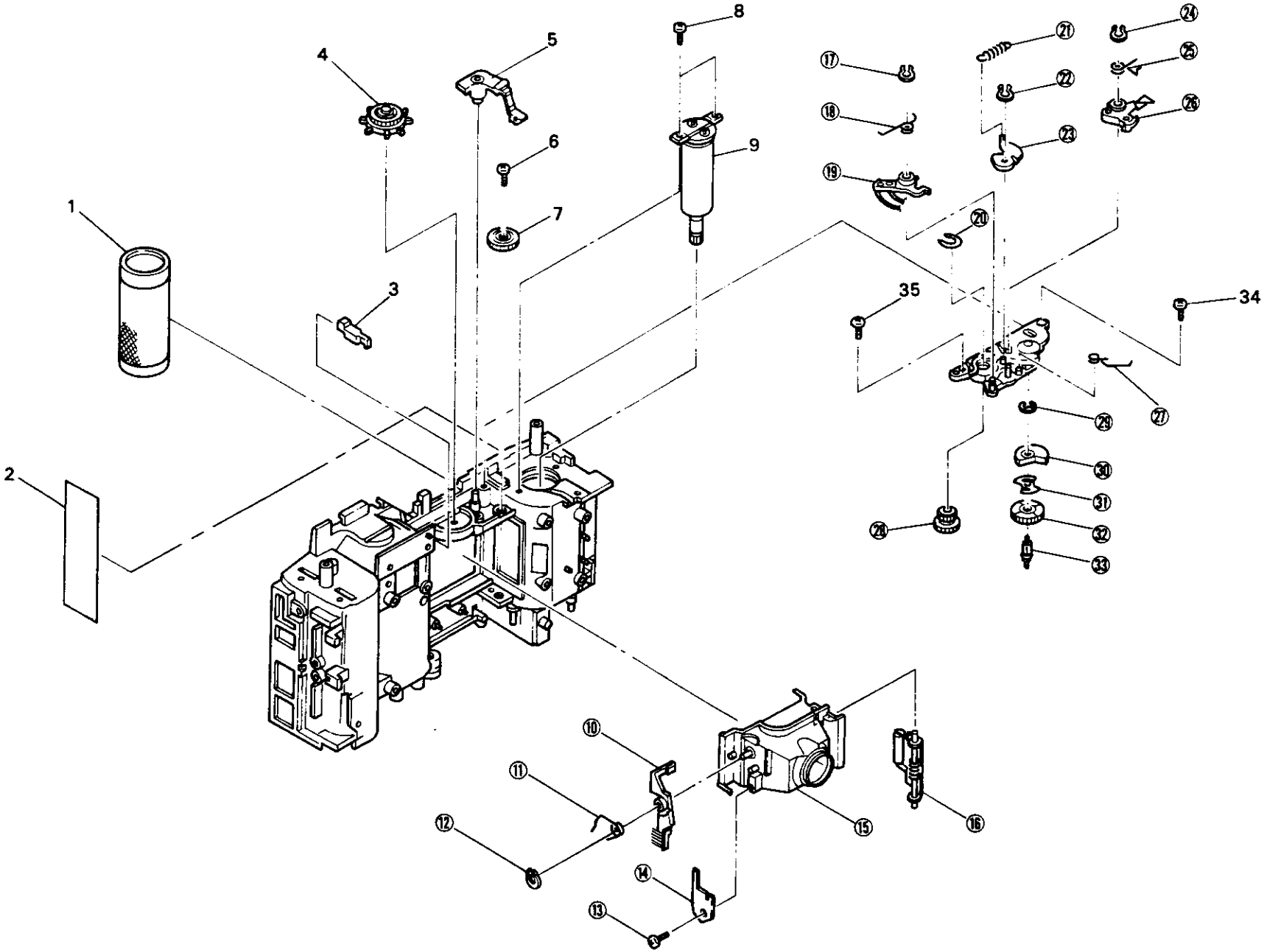
A

Sketch No.	Part No.	Description	Sketch No.	Part No.	Description	Sketch No.	Part No.	Description
①	3139 1141	Self button	25	09841630W	Screw M1.6 × 3.0			
②	3139 1138	Counter window	㉖	3139 1151	Barrier guide			
③	3139 1139	W. Indicator window	㉗	3136 1144	Barrier lever			
④	3139 1142	Self contact	㉘	3139 1152	Barrier			
⑤	09841625W	Screw M1.6 × 2.5	㉙	3116 1683	Retaining ring			
⑥	3139 1143	Self spring	㉚	3136 1146	Spring			
① – ⑦	3139 1037	Top cover ass'y	㉖ – ㉚	3139 1035	Barrier ass'y			
8	09841635W	Screw M1.6 × 3.5	㉛	3139 1156	ISO Button base plate			
9	3136 1194	Pin	㉜	3139 1158	Focus button base plate			
⑩	3136 1202	Shield	㉝	09841635W	Screw M1.6 × 3.5			
⑪	3136 1201	Shield	㉞	3139 1154	Barrier button base plate			
⑫	3136 1017	Pressure plate	㉟	3139 1012	ISO Frame			
⑬	3136 1195	Film window	㊱	3139 1454	Finder glass			
⑭	3136 1196	Shield	㊲	3139 1155	ISO Button			
⑩ – ⑮	3136 1086	Back cover ass'y	㊳	3139 1157	Focus button			
16	09841670W	Screw M1.6 × 7.0	㊴	3139 1456	ISO window			
17	3136 1103	Patorone holder	㊵	3139 1153	Barrier button			
18	3139 1140	Release button	㊶	3139 1135	Leatherette			
19	3136 1147	Plate	㉖ – ㊷	3139 1052	Front cover ass'y			
20	09841635X	Screw M1.6 × 3.5						
21	3139 1014	Battery cover						
22	3139 1133	Bottom cover						
23	09842055X	Screw M2.0 × 5.5						
24	09842035X	Screw M2.0 × 3.5						

B.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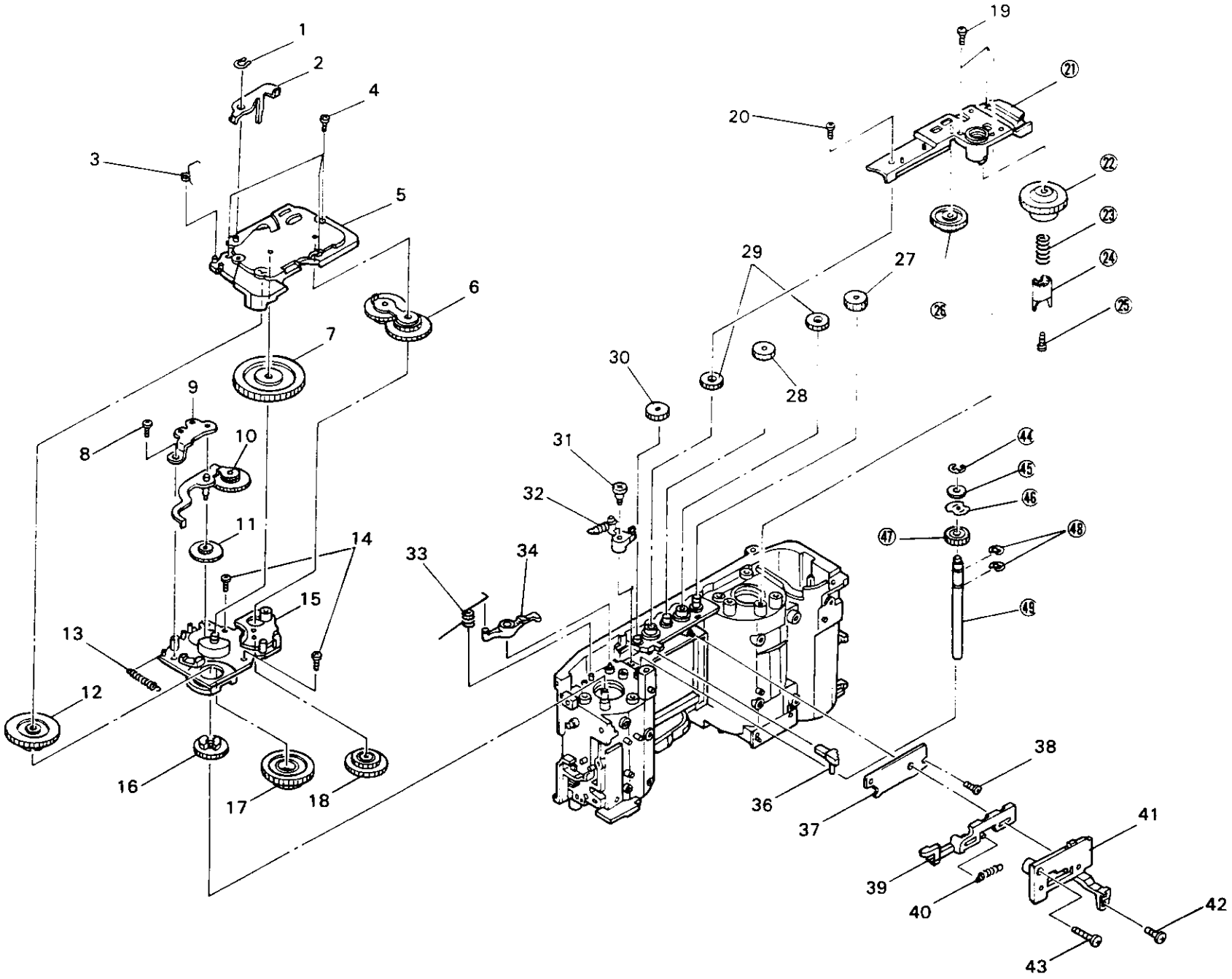
B

Sketch No.	Part No.	Description	Sketch No.	Part No.	Description	Sketch No.	Part No.	Description
1	3136 1039	Spool						
2	3136 1325	Film label						
3	3136 1311	F. detector pin						
4	3136 1253	Sprocket						
5	3136 1255	S. set lever						
6	02514025W	Screw M1.4 × 2.5						
7	3136 1251	S. 3rd gear						
8	09842025W	Screw M2.0 × 2.5						
9	3139 1034	Motor						
⑩	3136 1026	F. detector lever						
⑪	3136 1310	F. detector lever spring						
⑫	3116 1683	Retaining ring						
⑬	09851630W	Screw M1.6 × 3.0						
⑭	3136 1094	F. detect P.C.B.						
⑮	3136 1102	Light shield						
⑩ – ⑯	3139 1039	Light shield ass'y						
⑰ – ㉘	3136 1083	S. gear hold U.						
㉙	07200012E	Retaining ring						
㉛	3136 1272	Clutch spring						
㉙ – ㉝	3136 1082	S. set cam ass'y						
34	09841635X	Screw M1.6 × 3.5						
35	09851635W	Screw M1.6 × 3.5						

C.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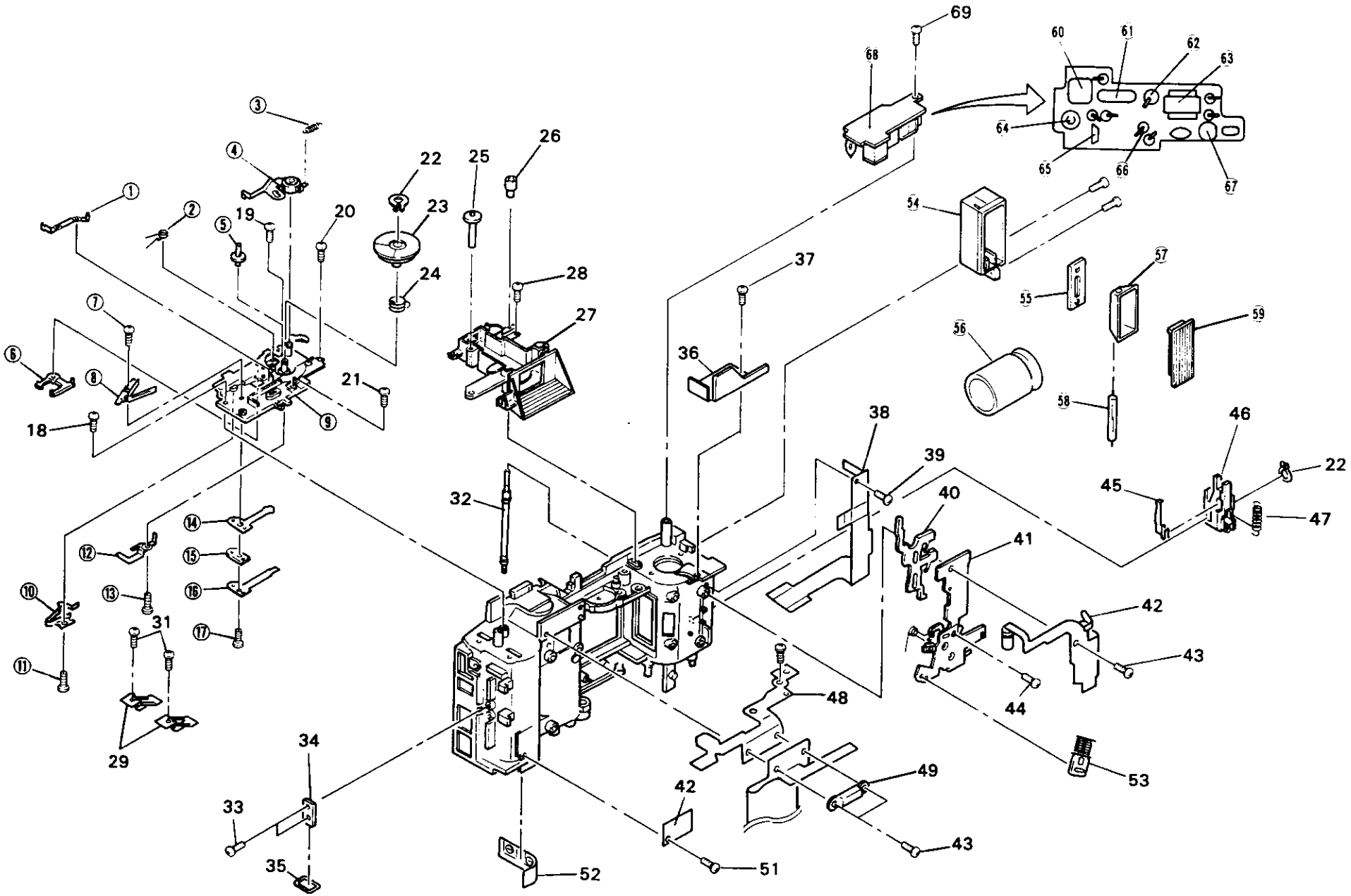
C

Sketch No.	Part No.	Description	Sketch No.	Part No.	Description	Sketch No.	Part No.	Description
1	3116 1683	Retaining ring	㉖	3136 1287	Rewinding 11th gear			
2	3136 1297	MR lever	⑳ – ㉖	3136 1073	Rewinding base plate ass'y			
3	3136 1304	MR lever	27	3136 1286	Rewinding 10th gear.			
4	09851640W	Screw M1.6 × 4.0	28	3139 1285	Rewinding 8th gear.			
5	3136 1232	Winding plate	29	3116 1284	Rewinding 7. 9th gear.			
6	3136 1003	W. 3rd lever ass'y	30	3136 1283	Rewinding 6th gear.			
7	3136 1237	W. 5 gear	31	3136 1296	Set lever shaft			
8	09851645W	Screw M1.6 × 4.5	32	3139 1025	Set lever ass'y			
9	3136 1244	W1 gear holder	33	3139 1303	Spring			
10	3136 1002	W1 lever	34	3136 1299	Winding stop lever			
11	3136 1233	W1 gear	36	3136 1295	W. set button			
12	3136 1238	W6 gear (Upper)	37	3136 1305	W-R Changing plate			
13	3136 1265	W2 spring	38	09851625W	Screw M1.6 × 2.5			
14	09851635W	Screw M1.6 × 3.5	39	3136 1027	W – R Changing lever			
15	3136 1231	W. hold plate	40	3136 1300	Spring			
16	3136 1239	W6 gear (Bottom)	41	3136 1298	Changing lever plate			
17	3136 1240	Spool gear	42	09841635X	Screw M1.6 × 3.5			
18	3136 1249	S1 gear	43	09841660W	Screw M1.6 × 6.0			
19	09842040W	Screw M2.0 × 4.0	㊹ – ㊽	3136 1081	Shaft: S. 2nd gear			
20	09841640W	Screw M1.6 × 4.0						
㉒	3136 1288	Rewinding 12th gear						
㉓	3136 1289	Fork spring						
㉔	3136 1290	Rewinding fork						
㉕	3125 1734	Screw						

D.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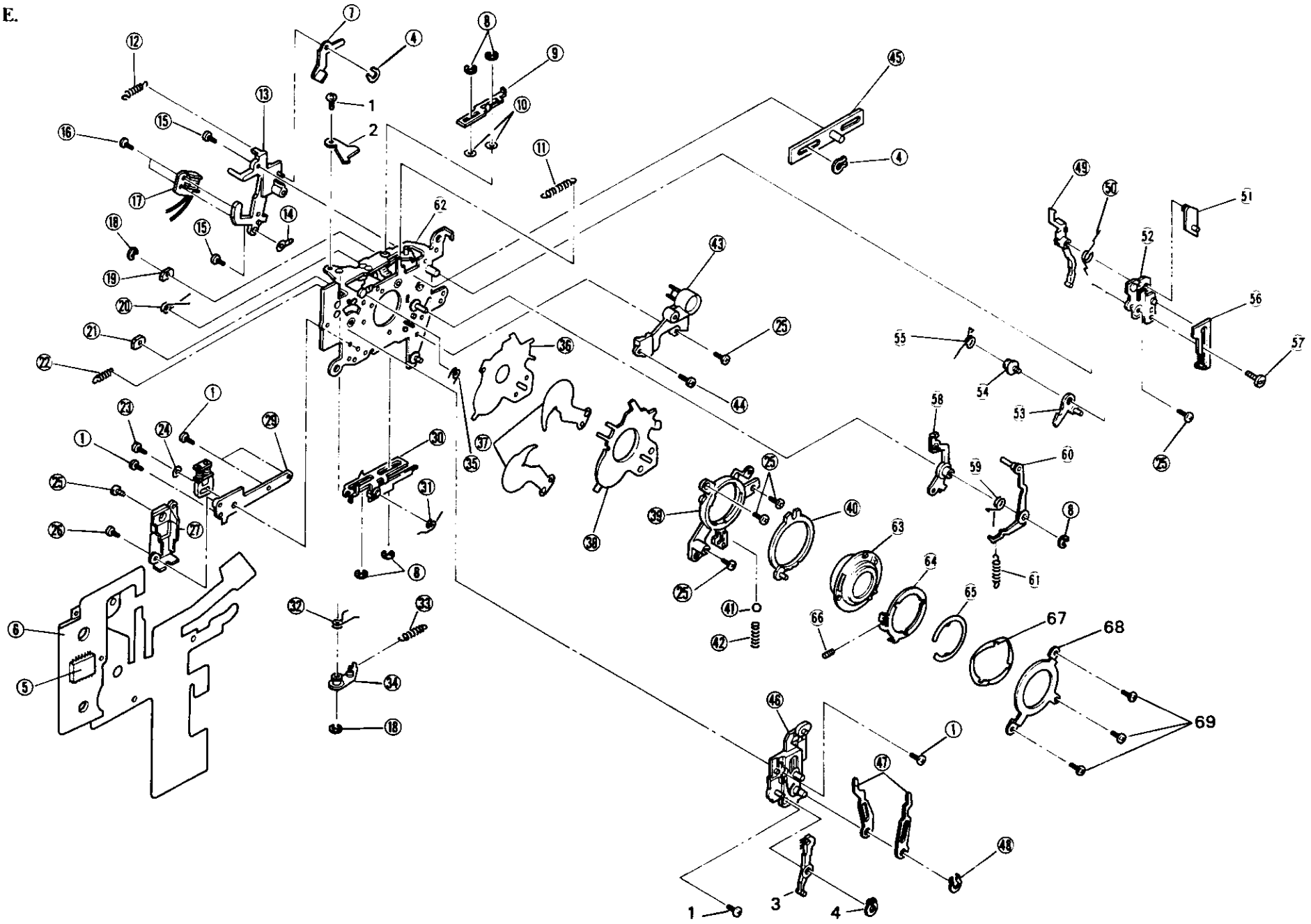
D

Sketch No.	Part No.	Description
⑫	3136 1684	Release contact C
⑭	3136 1682	Release contact A
⑮	3136 1685	Insulator
⑯	3136 1683	Release contact B
①－⑰	3136 1085	Counter base plate ass'y
18	09842040W	Screw M2.0 × 4.0
19	09851640W	Screw M1.6 × 4.0
20	09841635X	Screw M1.6 × 3.5
21	09852060X	Screw M2.0 × 6.0
22	3117 1641	Retaining ring
23	3136 1392	Counter
24	3136 1393	Counter spring
25	3136 1395	C2 gear
26	3136 1322	Winding signal
27	3139 1040	Finder ass'y
28	09842030W	Screw M2.0 × 3.0
29	3136 1827	Battery contact
31	09842025W	Screw M2.0 × 2.5
32	3136 1080	Winding signal roller ass'y
33	09802030W	Screw M2.0 × 3.0
34	3136 1107	Strap metal
35	3136 1109	Strap ring
36	3139 1383	Flash plate
37	09801620W	Screw M1.6 × 2.0

Sketch No.	Part No.	Description
38	3139 1092	P. FPC ass'y
39	09851625W	Screw M1.6 × 2.5
40	3136 1032	P lever ass'y
41	3139 1079	P lever plate ass'y
42	3139 1091	Power supply FPC
43	09851630W	Screw M1.6 × 3.0
44	09841630W	Screw M1.6 × 3.0
45	3136 1330	Spring: Back cover
46	3136 1040	Back cover button ass'y
47	3136 1198	Spring: Back cover button
48	3139 1095	F. FPC
49	3136 1044	Plate
51	09851618W	Screw M1.6 × 1.8
52	3131 1108	Label
53	3136 1660	L magnet
57	3136 9001	Reflecting mirror
58	3136 9005	Flash tube
59	3136 1413	Protector
60	3136 9007	Trigger coil
61	3136 9013	Capacitor
62	3136 9010	Diode
63	3136 9003	Transformer
64	3136 9006	Neon lamp
65	3136 9009	Transistor

Sketch No.	Part No.	Description
66	3136 9011	Diode
67	3136 9008	Transistor
54 – 68	3139 1411	Flash ass'y
69	09851635W	Screw M1.6 × 3.5

E.



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Sketch No.	Part No.	Description	Sketch No.	Part No.	Description	Sketch No.	Part No.	Description
1	02516060W	Screw M1.6 x 6.0						
2	3136 1306	P. plate: wind						
3	3136 1030	SW. lever ass'y						
4	3116 1683	Retaining ring						
⑤	3131 1821	AE IC						
⑤ – ⑥	3139 1090	AE FPC						
⑰	3136 1661	S magnet						
㉘	3136 1660	L magnet						
㊲	3136 1652	Shutter blade						
㊸	3139 1015	Cds plate ass'y						
㊺	3139 1004	Focus lever						
㊻	3139 1008	Lens cover base plate						
㊼	3139 1503	Pan focus lever						
51 – 55	3136 1031	Cam base plate						
58 – 60	3139 1041	Double lever						
7 – 62	3139 1055	Shutter ass'y						
65 – 66	3139 1032	Lens ass'y						
67	3139 1478	Spring						
68	3139 1486	Lens hold ring						
69	09841620X	Screw M1.6 x 2.0						